

CLAIMS

1. A sprayer device (10) with a trigger-operated pump comprising:

- a body (14) provided with a base that can be applied to the mouth of a liquid container and a delivery nozzle (15) wherefrom the liquid is sprayed, in said body (14) being formed a plunger chamber (20), an input duct (37) which puts the inside of the container into communication with said chamber (20) and an output duct (38) which puts said chamber (20) into communication with the sprayer nozzle (15), **through an input hole (34) and an output hole (35) respectively, formed in the rear wall of said chamber (20);**
- a trigger lever (29) hinged to said sprayer body (14) and to the stem (32) of a plunger (33) tightly acting in said chamber (20) defined in the sprayer body (14),
- spring means (60) interposed between said trigger (29) and said sprayer body (14), and
- a suction and delivery valve (100) disposed inside said chamber (20) of the sprayer body to generate a first one-way passage between said input duct (37) of the sprayer body and said chamber (20) and a second one-way passage between said chamber (20) and said output duct (38) of the sprayer body, characterised in that
- a housing seat (36) suited to integrally engage a central portion (102) of said valve (100) is disposed in said rear wall of the chamber (20), in a central position between said input hole (34) and said output hole (35),**

2. A sprayer device according to claim 1, characterised in that said suction and delivery valve (100), with respect to said central portion (102) engageable integrally in said valve-housing seat (36) formed in the body (14), comprises:

- an upper portion (110) acting as a shutter for said output hole (35), and
- a lower portion (120) acting as a shutter for said input hole (34).

3. A sprayer device according to claim 2, characterised in that said upper portion of the valve (110) comprises a frustoconical tang (112) with a blind hole (113) tapered so as to generate a side wall thin enough to be deformed radially inward by the liquid

pressure, said frustoconical tang (112) engaging in said output hole (35) formed in the sprayer body.

4. A sprayer device according to claim 2 or 3, characterised in that said lower
5 portion (110) comprises a substantially dome-shaped portion (122) connected to the
valve body (101) by means of two flexible bridges (101'), said dome-shaped portion
(122) engaging in said input hole (34) formed in the sprayer body.
5. A sprayer device according to any one of the preceding claims, characterised in
10 that said spring means comprise a leaf spring (60) consisting of two elastic arms (61),
disposed parallel to each other, in which each arm (61) is substantially C-shaped in a
side view.
6. A sprayer device according to claim 5, characterised in that said elastic arms
15 (61) are connected to each other, at one of their ends, by a cross connecting bar (62),
so that the free ends (63) of the arms (61) are constrained to the trigger (29) and the
cross connecting bar (62) abuts against the body (14) of the sprayer.
7. A sprayer device according to claim 6, characterised in that the free ends (63)
20 of said elastic arms (61) of the spring are constrained to the trigger (29) at the point of
constraint (31) in which the stem (32) of the piston is hinged and said cross connecting
bar (62) of the spring abuts against the body (14) of the sprayer forwardly beneath the
piston chamber.
- 25 8. A sprayer device according to any one of claims 5 to 7, characterised in that
said leaf spring (60) is made in a single piece from acetal resin.